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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/634,276 | 08/05/2003 | Andreas Fath | 071308.0463 | 7127 |

31625 7590 10/02/2006

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| EXAMINER |
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KIM, CHRISTOPHER S

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| ART UNIT | PAPER NUMBER |
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3752

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------|-----------------------------|--|
| Office Action Summary | Application No. 10/634,276 | Applicant(s) FATH ET AL. | |
| | Examiner Christopher S. Kim | Art Unit 3752 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,6 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,6 and 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 23, 2006 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Specification

3. The amendment filed June 23, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the amendment to paragraph 24 includes the term "...may have essentially the same included angle." The disclosure, as originally filed, fails to disclose that included angles being the same is an option. Rather, it discloses that they are essentially the same.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

4. Claims 1 and 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the same included angle" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claims 1 and 10 recite the limitation "...essentially the same..." Although the specification discloses the term "essentially the same," it lacks any interpretation as to what constitutes "essentially the same." It is uncertain how many degrees two angles must be within each other to constitute being "essentially the same."

Claims 1 and 6 recite the limitation "...essentially parallel..." Although the specification discloses the term "essentially parallel," it lacks any interpretation as to what constitutes "essentially parallel." It is uncertain how many degrees two lines must be within each other to constitute being "essentially parallel."

Claim Rejections - 35 USC § 102

5. Claims 1, 3, 6, 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Pataki et al. (5,899,389).

Pataki discloses a fuel injection valve comprising:

a nozzle body 108 having a nozzle body seat (seating surface for needle 104); and

a nozzle needle 104 incorporating a nozzle shaft (portion of needle 104 with diameter d_1) and a nozzle needle seat (conical tip of needle 104), wherein the nozzle needle seat (conical tip of needle 104) comprises a sealing edge (downstream edge of surface 116) provided between an outer surface of a conical nozzle needle tip and a frusto-conical body section 116 of the nozzle needle;

a gap (gap between the body 108 and needle 104 in the section of the needle between surfaces 114 and 116)

6. Claims 6, 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ushimura (4,470,548).

Ushimura discloses a fuel injection valve comprising: a nozzle body 14; a nozzle needle 12; conical nozzle needle tip 40; frusto-conical body section 36.

In claim 6, the recitation "such that the gap is operable to hydraulically dampen movement of the nozzle needle seat toward the nozzle body seat" merely requires the ability/capability to operate in such a manner. The device of Ushimura has the capability to operate in such a manner because the gap of Ushimura traps/contains part of the fuel flow.

7. Claims 6, 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Holzgreffe (4,982,901).

Holzgreffe discloses a fuel injection valve comprising: a nozzle body 15; a nozzle needle 6; conical nozzle needle tip 21; frusto-conical body section 20.

In claim 6, the recitation "such that the gap is operable to hydraulically dampen movement of the nozzle needle seat toward the nozzle body seat" merely requires the

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ability/capability to operate in such a manner. The device of Holzgreffe has the capability to operate in such a manner because the gap of Holzgreffe traps/contains part of the fuel flow.

8. Claims 6, 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Holzgreffe et al. (5,012,981).

Holzgreffe discloses a fuel injection valve comprising: a nozzle body 15; a nozzle needle 6; conical nozzle needle tip 21; frusto-conical body section 20.

In claim 6, the recitation "such that the gap is operable to hydraulically dampen movement of the nozzle needle seat toward the nozzle body seat" merely requires the ability/capability to operate in such a manner. The device of Holzgreffe has the capability to operate in such a manner because the gap of Holzgreffe traps/contains part of the fuel flow.

Response to Arguments

9. Applicant's arguments filed June 23, 2006 have been fully considered but they are not persuasive.

Regarding the recitation "the gap is operable to hydraulically dampen movement of the nozzle needle seat toward the nozzle body seat," applicant argues inherency. The gap can be clearly seen in Ushimura, Holzgreffe and Holzgreffe et al. Applicant is directed to the figures in each of the references. And in each of the references, the gap has the ability to perform the dampening function. The claim limitation merely requires

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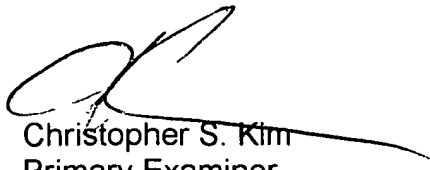
the ability to so perform. It is not require that references explicitly state that damping occurs.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571) 272-4905. The examiner can normally be reached on Monday - Thursday, 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on (571) 272-4919. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher S. Kim
Primary Examiner
Art Unit 3752

CK